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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/826,238	04/04/2001	Billy R. Carpenter	TA-00480	2500

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James E. Bradley
BRACEWELL & PATTERSON, LLP
P.O. Box 61389
Houston, TX 77208-1389

EXAMINER

KNOLL, CLIFFORD H

ART UNIT	PAPER NUMBER
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2112

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/826,238

Applicant(s)

CARPENTER, BILLY R.

Examiner

Clifford H. Knoll

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This Office Action is responsive to communication filed 8/4/04. Currently claims 1-20 are pending.

Claim Rejections - 35 USC § 112

Claim 6 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Recitation of "the layers" (both recitations, line 2 and 4) are indefinite because the antecedent basis is unclear regarding "layers" introduced in the claim, and "layers" introduced in the parent claim.

Claim Rejections - 35 USC § 103

1. *Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiener (US 5524679 A) in view of Benedetto (US 20040221087 A1).*

Regarding claim 1, Wiener discloses a wiring network having a composite fabrication assembly comprising a plurality of conductive conduits placed between layers of the assembly each having opposite ends (e.g., col.5, lines 31-34), first and second gateways (col.8, lines 10-13) for selecting one of the conduits (e.g., col. 8, lines 16-19). Wiener also discloses a communications network (e.g., col. 8, lines 6-9) with active interconnects and switching and gating elements (e.g., col. 8, lines 47-59) but

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neglects to expressly mention the explicit details of switching; however, Benedetto discloses this. Benedetto discloses controlling selecting one of the conduits from the plurality and directing transmittable information thereon (e.g., para. 56).

It would have been obvious to one of ordinary skill in the art to combine Benedetto with Wiener because Benedetto provides a means to advantageously provide control of a redundant plurality of conduits, such as the system of Wiener.

Regarding claim 2, Wiener also discloses multiple component specific conduits between the gateways and specific component (e.g., col.8, lines 29-40).

Regarding claim 3, Wiener also discloses comprising electrical wires (e.g., col.8, lines 20-21).

Regarding claim 4, Wiener also discloses comprising optical wires (e.g., col.8, lines 15-16).

Regarding claim 5, Wiener also discloses each gateway as a bus (e.g., col.8, lines 39-44).

Regarding claim 6, Wiener also discloses wherein each gateway is placed between layers of the assembly, further including a terminal for connecting a component to the gateway externally of the layers (e.g., col.8, lines 29-40).

Regarding claim 7, Benedetto also discloses a programmable server for controlling selecting (e.g., para. 67).

Regarding claim 8, Benedetto also discloses gateways associated with each externally connected component and the server is adapted for selecting any of a plurality of conduits for transmitting information (e.g., paras. 71-73).

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Regarding claim 9, Benedetto discloses selecting the conduit on the basis of predetermined hierarchy (e.g., paras. 69-70).

Regarding claim 10, Benedetto also discloses selecting the conduit of least resistance (e.g., para. 70).

Regarding claim 11, Benedetto also discloses selecting the shortest conduit (e.g., para. 70).

Regarding claim 12, Benedetto discloses a conduit selector on each gateway (e.g., para. 71).

Regarding claim 13, Wiener also discloses a vehicle having a central control center and a plurality of components located remotely from the central control center and controlled from the central control center (col.8, lines 52-54).

Regarding claim 15, Wiener discloses a plurality of conductive conduits placed between layers of the assembly each having opposite ends (e.g., col.5, lines 31-34), first and second gateways (col.8, lines 10-13). Wiener also discloses a communications network (e.g., col. 8, lines 6-9) with active interconnects and switching and gating elements (e.g., col. 8, lines 47-59) for selecting one of the conduits (e.g., col. 8, lines 16-19) but neglects to expressly mention the explicit details of switching; however, Benedetto discloses this. Benedetto discloses controlling selecting one of the conduits from the plurality and directing transmittable information thereon (e.g., para. 56).

It would have been obvious to one of ordinary skill in the art to combine Benedetto with Wiener because Benedetto provides a means to advantageously provide control of a redundant plurality of conduits, such as the system of Wiener.

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Regarding claim 17, Wiener also discloses the fabric made of woven high strength fibers (e.g., col. 2, lines 52-56) impregnated with resin (e.g., col. 2, line 66 – col. 3, line 4). Wiener does not expressly mention the controller; however, Benedetto also discloses the controller selecting includes a computer (e.g., para, 67).

Regarding claim 18, Wiener discloses a plurality of conductive conduits placed between layers of the assembly each having opposite ends (e.g., col.5, lines 31-34), first and second gateways (col.8, lines 10-13). Wiener also discloses a communications network (e.g., col. 8, lines 6-9) with active interconnects and switching and gating elements (e.g., col. 8, lines 47-59) but neglects to expressly mention the explicit details of instructions for switching; however, Benedetto discloses this. Benedetto discloses a server for selecting a conduit from among the plurality and for selecting and directing the transmittable information over the selected conduits (e.g., para 85, "root L2 switch").

It would have been obvious to one of ordinary skill in the art to combine Benedetto with Wiener because Benedetto provides a means to advantageously provide control of a redundant plurality of conduits, such as the system of Wiener.

Regarding claim 19, Benedetto discloses the server instructs the gateways to select a second of the conduits when the server determines the first conduit is unusable (e.g., para. 85, "topology change notification").

2. *Claims 14, 16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiener (US 5524679 A) in view of Benedetto (US 20040221087*

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A1) as applied in respective parent claims, further in view of Huang (US 2002/0078138).

Regarding claims 14 and 16, Wiener does not expressly mention the location of a controlling selector and components; however Huang discloses this. Huang discloses a cockpit with the controller located in the cockpit and the remote component located outside the cockpit (e.g., para. 14).

Regarding claim 20, Wiener also discloses the fabric made of woven high strength fibers (e.g., col. 2, lines 52-56) impregnated with resin (e.g., col. 2, line 66 – col. 3, line 4) but does not expressly mention the location of a controlling selector and components; however Huang discloses this. Huang discloses a cockpit with the controller located in the cockpit and the remote component located outside the cockpit (e.g., para. 14).

It would have been obvious to one of ordinary skill in the art to combine Huang with Wiener and Benedetto because Huang teaches the advantages of distributed locations among a controlling component, such as in a cockpit (e.g., para. 3), and remote components (e.g., para. 3).

Response to Arguments

Applicant's arguments directed particularly to the teaching reference of Huang and its combination with Wiener have been considered but are moot in view of the new ground(s) of rejection; however some arguments are relevant to the current rejection, namely those that bear on features disclosed by Wiener.

Applicant argues that Wiener does not disclose “a wiring network” (claim 1) or “a wiring system” as in claims 15 and 18 (p. 9); however, as seen, Wiener discloses a “structure for transmission and reception of laser-generated optical signals in conjunction with packaging and interconnecting components. Such embodiments can be used to provide high speed data buses or channels to interconnect components in a high performance computer system” (col. 8, lines 10-15), which adequately teaches the use of the invention as either network claimed.

Applicant further argues that Wiener does not disclose “a plurality of conductive conduits placed *between* layers of a fabrication assembly as featured in said claims, but instead teaches weaving the optical fibers” (p. 9, emphasis original); however, the use of weaving to fabricate does not exclude its application to the claimed invention which recites “a plurality of conductive conduits place between layers” (claim 1). Whether these conductive conduits might be in part “woven” as in Wiener, is immaterial to Wiener’s anticipatory use. In fact, the Applicant himself recites “woven, high strength fibers” in dependent claims (e.g., claims 4, 20), thus indicating that woven material cannot be excluded from the broader recitation of the parent claim. This woven material is “embedded in a rigid material, such as epoxy” (Wiener, col. 3, lines 3-4), thus anticipating the layers between which the conduits are disposed in the claimed invention.

Applicant further argues that Wiener does not disclose “a gateway placed *between* layers of the fabrication assembly” (p. 9, emphasis original); this feature is found in claim 6; however, the layers introduced in claim 6 are part of the overall

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gateway which in a physical manifestation will have layers, and for which no precise relationship is established to previously introduced layers.

Applicant argues that Wiener “teaches away from use of ‘optical fibers disposed inside a laminated structure’” (p. 10); however, Wiener at the passage cited by the Applicant (col. 2, lines 21-33, 37-40) does not “teach away” but rather highlights problems in the prior art. Wiener clearly discloses the use of optical fibers (e.g., Title).

Applicant argues against Wiener’s application against the recited layers (p. 12-13); however this has been treated supra. Applicant specifically argues that “each fabric layer [of Wiener] is still only a single fabric layer regardless of the use of resin” (p. 13) and “[a]dding coating 20 is simply part of forming the Wiener single weave layer” (p.13); however, any specificity as to the layers that distinguishes from Wiener’s layers is not supported in the claims. Wiener weaves fibers together and these fibers are taught as embedded. The fibers and the resin in which they are embedded are interpreted as layers to anticipate the claimed invention.

Applicant further argues that Wiener does not disclose “gateways or gateway means”, but “only describes active interconnects which may include ‘gating elements’” (pp. 13-14); however, these gating elements taught by Wiener are the gateway means of the Applicant’s invention. Additional features of the gateway are provided by Benedetto.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clifford H. Knoll whose telephone number is 571-272-3636. The examiner can normally be reached on M-F 0630-1500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on 571-272-3676. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

chk



REHANA PERVEEN
PRIMARY EXAMINER
7/7/05